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2 **CLAIMS:**

3 1. An earth boring drill bit, comprising:

4 a body having at least one leg with a bearing pin depending therefrom;

5 a cone rotatably mounted on the bearing pin, the cone having a back face region having

6 an annular wall spaced radially outward from a seal gland; and

7 a diverter having a head extending alongside the annular wall of the back face region, the

8 head being generally wedge-shaped and facing into the direction of rotation of the cone to divert

9 debris from the seal gland.

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11 2. The drill bit according to claim 1, wherein the head of the diverter has an inner side that

12 substantially follows a contour of the annular wall of the back face region.

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14 3. The drill bit according to claim 1, wherein the head of the diverter has an inner side that is

15 spaced from the annular wall of the back face region by a substantially uniform width clearance.

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17 4. The drill bit according to claim 1, wherein the head of the diverter has an inner side that is

18 substantially perpendicular to a radial line emanating from an axis of the bearing pin.

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20 5. The drill bit according to claim 1, wherein the head of the diverter has an inner side and an

21 outer side that diverge from each other.

1 6. The drill bit according to claim 1, wherein the head of the diverter has an inner side and an
2 outer side, wherein the inner side generally follows a contour of the annular wall, and the outer
3 side is oblique relative to the annular wall.

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5 7. The drill bit according to claim 1, wherein the head of the diverter has a leading side and a
6 trailing side, the trailing side having a greater width than the leading side.

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8 8. The drill bit according to claim 1, wherein the head of the diverter has an inner side and an
9 outer side that diverge from each other at an acute angle.

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11 9. The drill bit according to claim 1, wherein the diverter has a cylindrical base that locates
12 within a hole formed in the bit leg, the base having an innermost portion that is spaced closer to
13 an axis of the bearing pin than the annular wall of the back face region.

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15 10. An earth boring drill bit, comprising:

16 a body having at least one leg with a bearing pin depending therefrom and a last
17 machined surface surrounding a junction of the bit leg and the bearing pin, the last machined
18 surface being perpendicular to an axis of the bearing pin;

19 a cone rotatably mounted on the bearing pin, the cone having a back face region with a
20 flat inner portion and a flat outer portion separated by an annular wall, the flat inner portion being
21 parallel to and spaced from the last machined surface by an inner clearance, the flat outer portion
22 being parallel to and spaced from the last machined surface by an outer clearance that is greater
23 than the inner clearance; and

1 a diverter having a base mounted in a hole in the last machined surface of the bit and a
2 head protruding from the hole into the outer clearance, the head having an inner side that is
3 spaced from the annular wall of the back face region by a clearance, the head having an outer
4 side that is oblique to the annular wall of the back face region to divert debris from the inner
5 clearance.

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7 11. The bit according to claim 10, wherein the head of the diverter has a leading side and a
8 trailing side relative to the direction of rotation of the cone, and wherein the leading side has a
9 lesser width, measured along a radial line of the axis of the bearing pin, than the trailing side.

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11 12. The bit according to claim 10, wherein the inner and outer sides of the head diverge from
12 each other from a leading side to a trailing side of the diverter relative to a direction of rotation of
13 the cone.

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15 13. The bit according to claim 10, wherein the head has a leading side and a trailing side relative
16 to the direction of rotation of the cone, and wherein a distance from the leading side to the
17 trailing side is the same as a diameter of the base of the diverter.

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19 14. The bit according to claim 10, wherein the inner side of the head has a length substantially
20 equal to a diameter of the base.

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22 15. The bit according to claim 10, wherein the base is of the diverter has an inner portion that is
23 spaced closer to the axis of the bearing pin than the annular wall of the back face region.

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2 16. An earth boring drill bit, comprising:

3 a body having at least one leg with a bearing pin depending therefrom;

4 a cone rotatably mounted on the bearing pin, the cone having a back face spaced from the

5 bit leg by a clearance; and

6 a diverter having a base mounted in a hole in the bit leg and a head protruding therefrom

7 in the clearance between the back face and the bit leg, the head having a leading side and a

8 trailing side considering the direction of rotation of the cone, the leading side being of a narrower

9 width than the trailing side, measured along a radial line emanating from an axis of the bearing

10 pin, to divert debris away from the clearance.

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12 17. The bit according to claim 16, wherein a distance from the leading side to the trailing side is

13 substantially equal to a diameter of the base.

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15 18. The bit according to claim 16, wherein the head has an inner side and an outer side, and

16 wherein a radial line of the axis of the bearing pin passes obliquely through the outer side.

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18 19. The bit according to claim 16 wherein the head has an inner side and an outer side, and

19 wherein the inner side is generally perpendicular to a radial line of the axis of the bearing pin.

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21 20. The bit according to claim 17, wherein the head is generally triangular shaped viewed in a

22 cross-section perpendicular to an axis of the base.

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